MATH 114 – 008 Analytic Geometry and Calculus II
Spring 2022

Instructor: ***Gabriela Bulancea***
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Office: Exploratory Hall, Room 4217

Lecture: Monday, Wednesday 10:30 am – 12:20 pm

Office Hours: TR 10:00 am – 11 am and T 11am-12 pm, or by appointment
The office hours will be held on Zoom; you can join the Zoom meetings using the Zoom link on Blackboard or the Zoom link https://gmu.zoom.us/j/8097488760
Please let me know in advance if you would like to attend office hours in-person in my office.

Final Exam
Wednesday, May 11, 2022, 10:30 am - 1:15 pm

Recitation: Wednesday 4:30 pm – 5:20 pm, or 5:25 pm – 6:15 pm
TA: Jon Rossi
jrossi5@gmu.edu

Textbook: *Thomas' Calculus (Early Transcendentals)* by Hass, Heil and Weir (fourteenth edition, Pearson publisher). We cover most of Chapters 6 to 11. We will also use MyMathLab from Pearson, which comes bundled with the book in the various formats.

Prerequisites: C or better in Calculus I (MATH 113).

Broad purpose of the course: At the end of the semester the student should be able to solve various geometry and physics problems that require the use of definite integrals, use techniques of to evaluate integrals, understand infinite series and power series, and be able to identify and graph conic sections and basic parametric and polar curves.

Class Policies

1. **Technology: We will be using the online homework system MyMathLab for which you need to the access code associated with the textbook.**

2. **Teaching and learning method:**

- As a university student, you are responsible for your own learning.
- Lecture, demonstration, discussion, problem-solving, tests, and group tasks will be used to help you learn. **Class attendance and completion of assignments are expected.**
- **Pre-recorded lectures will be posted on the Blackboard page of the course. You should watch these recordings before our in-person class in which we will be discussing the material covered in the corresponding recording.**
- In class we will solve additional problems, some of which you will be asked to attempt to solve on your own and then participate to the class discussion related to finding solutions for these problems.

3. **Communication:**

- **You will receive weekly Blackboard announcements regarding homework, exams, and specific readings for the respective week.**

- **If you have questions of general interest, please post them on the Blackboard discussion board, so that everybody can benefit from having the answer to that question. If you have questions about your academic performance in the class or questions of a confidential nature, please send them to me via email.**

4. **Homework and quizzes:**

- There will be online homework problems **@** **http://www.mymathlab.com** from each section, which will be graded. Also, each week there will be a short quiz administered online through mymathlab.
- **MyMathLab: To register please use the Mymathlab link posted on the Blackboard page of the course.**

5. **Tests:**

There is a tentative schedule for tests below. You are responsible for keeping up with all information announced in the classroom and on Blackboard. There will be no makeup tests. You may replace your lowest test grade with your final exam percentage.

6. **Class participation:**

Your participation to class discussion and attendance of office hours will count towards your class participation grade.

7. **Grading:** Grades will be assigned according to that percent system below which gives you the highest class average:

20% Test 1 Wednesday, February 23	**OR**	20% Test 1 Wednesday, February 23
20% Test 2 Wednesday, April 13		20% Test 2 Wednesday, April 13
30% Final Exam Wednesday, May 11		25% Final Exam Wednesday, May 11
15% Mymathlab homework and quizzes		15% Mymathlab homework and quizzes
10% Recitation grade		10% Recitation grade
5% Class participation		10% Class participation

Grading scale:

A-: 90 - 92;	**A: 92 – 98;**	**A+: 98 – 100**
B-: 80 - 82;	**B: 82 – 88;**	**B+: 88 – 90**
C-: 70 - 72;	**C: 72 – 78;**	**C+ : 78 – 80**
D: 60 - 70;	**F: 0 – 60.**	

Specific grading disputes should be brought to my attention within one week of return of the assignment. Appeals outside of this timeframe will not be considered.

8. **Additional Help:**

- ***Office hours (instructor, TA, LAs)***
- ***The Math Tutoring Center is offering free tutoring services for undergraduate students currently enrolled in a GMU Math course. See http://math.gmu.edu for information about how to access the Tutoring Center and for the current schedule.***

UNIVERSITY POLICIES:

- The University Catalog, http://catalog.gmu.edu, is the central resource for university policies affecting student, faculty, and staff conduct in university academic affairs. Other policies are

available at http://universitypolicy.gmu.edu/. All members of the university community are responsible for knowing and following established policies.

- **Honor Code: - It is expected that each student in this class will conduct themselves within the guidelines of the Honor Code. Sharing with anyone information of any kind about exams or quizzes during the time that they are administered or using online resources during exams will result at a minimum in a grade of zero for all parties involved. Violations will also be reported to the university Honor committee where further consequences such as probation or expulsion from the university may be incurred. See http://academicintegrity.gmu.edu/honorcode for a copy of the Honor code.**
- **Disability Services:** Reasonable accommodations are available for students who have a documented disability. Please contact Disability Services if you require accommodations.
- **COUNSELING AND PSYCHOLOGICAL SERVICES** (CAPS): http://caps.gmu.edu
- **Regarding electronic devices** (such as laptops, cell phones, etc.), please be respectful of your peers and your instructor and do not engage in activities that are unrelated to class. Such disruptions show a lack of professionalism and may affect your participation grade.
- **Inclusivity and equity:** George Mason University is an intentionally inclusive community that promotes and maintains an equitable and just work and learning environment. We welcome and value individuals and their differences including race, economic status, gender expression and identity, sex, sexual orientation, ethnicity, national origin, first language, religion, age, and disability.
- **Gender identity and pronoun use:** If you wish, please share your name and gender pronouns with me and how best to address you in class and via email.

Safe Return to Campus Statement

- *All students taking courses with a face-to-face component are required to follow the university's public health and safety precautions and procedures outlined on the university Safe Return to Campus webpage (https://www2.gmu.edu/safe-return-campus). Similarly, all students in face-to-face and hybrid courses must also complete the Mason COVID Health Check daily, seven days a week. The COVID Health Check system uses a color code system and students will receive either a Green, Yellow, Red, or Blue email response. Only students who receive a "green" notification are permitted to attend courses with a face-to-face component. If you suspect that you are sick or have been directed to self-isolate, please quarantine or get testing. Faculty are allowed to ask you to show them that you have received a Green email and are thereby permitted to be in class.*
- *Students are required to follow Mason's current policy about facemask-wearing. As of August 11, 2021, all community members are required to wear a facemask in all indoor settings, including classrooms. An appropriate facemask must cover your nose and mouth at all times in our classroom. If this policy changes, you will be informed; however, students who prefer to wear will always be welcome in the classroom.*

Schedule for Math 114-002 Fall 2021

Week of	**Sections Covered**	**Topic**
Jan 24	Review Chapter 5, 6.1	Volume by Slicing
Jan 31	6.2, 6.3	Volume by Shells, Length of Curves;
Feb 7	6.4, 6.5, 6.6	Surface Area, Physical Applications
Feb 14	7.1, 7.2, 7.3, 7.4	Logarithmic and Exponentials Functions, Hyperbolic Functions
Feb 21	8.2, ***Test 1***	Integration by Parts, Test 1
Feb 28	8.3, 8.4	Trigonometric Integrals,Trigonometric Substitutions
Mar 7	8.5, 8.6, 8.7	Partial Fractions, Other Integration Strategies, Numerical Integration
Mar 14	Spring Recess (no classes)	
Mar 21	8.8, 9.1	Improper Integrals, Introduction to Differential Equations
Mar 28	9.2, 10.1, 10.2	Introduction to Differential Equations, Sequences, Infinite Series
Apr 4	10.3, 10.4, 10,5	Convergence Tests
Apr 11	10.6, ***Test 2***	Convergence Tests, Test 2
Apr 18	10.7, 10.8	Power Series, Taylor Series
Apr 25	10.9, 10.10, 11.1	Taylor Series, Parametric Equations
May 2	11.2, 11.3, 11.6	Polar Coordinates, Conic Sections
May 11	**Final Exam**	